

## **RAW SEQUENCE LISTING**

**The Biotechnology Systems Branch of the Scientific and Technical  
Information Center (STIC) no errors detected.**

Application Serial Number: 10/516,813A  
Source: IFWP  
Date Processed by STIC: 07/05/2006

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IFWP

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DATE: 07/05/2006

PATENT APPLICATION: US/10/516,813A

TIME: 13:49:52

Input Set : A:\11752-007US1.txt

Output Set: N:\CRF4\07052006\J516813A.raw

5 <110> APPLICANT: FRASER, JOHN D.  
 8 <120> TITLE OF INVENTION: IMMUNOMODULATORY CONSTRUCTS AND THEIR USES  
 11 <130> FILE REFERENCE: 11752-007US1  
 14 <140> CURRENT APPLICATION NUMBER: US 10/516,813A  
 15 <141> CURRENT FILING DATE: 2004-12-03  
 18 <150> PRIOR APPLICATION NUMBER: NZ 519371  
 19 <151> PRIOR FILING DATE: 2002-06-04  
 21 <150> PRIOR APPLICATION NUMBER: PCT/NZ03/00111  
 22 <151> PRIOR FILING DATE: 2003-06-04  
 25 <160> NUMBER OF SEQ ID NOS: 13  
 28 <170> SOFTWARE: PatentIn version 3.1  
 31 <210> SEQ ID NO: 1  
 32 <211> LENGTH: 209  
 33 <212> TYPE: PRT  
 34 <213> ORGANISM: Streptococcus pyogenes  
 37 <400> SEQUENCE: 1  
 39 Leu Glu Val Asp Asn Asn Ser Leu Leu Arg Asn Ile Tyr Ser Thr Ile  
 40 1 5 10 15  
 43 Val Tyr Glu Tyr Ser Asp Ile Val Ile Asp Phe Lys Thr Ser His Asn  
 44 20 25 30  
 47 Leu Val Thr Lys Lys Leu Asp Val Arg Asp Ala Arg Asp Phe Phe Ile  
 48 35 40 45  
 51 Asn Ser Glu Met Asp Glu Tyr Ala Ala Asn Asp Phe Lys Thr Gly Asp  
 52 50 55 60  
 55 Lys Ile Ala Val Phe Ser Val Pro Phe Asp Trp Asn Tyr Leu Ser Lys  
 56 65 70 75 80  
 59 Gly Lys Val Thr Ala Tyr Thr Tyr Gly Gly Ile Thr Pro Tyr Gln Lys  
 60 85 90 95  
 63 Thr Ser Ile Pro Lys Asn Ile Pro Val Asn Leu Trp Ile Asn Gly Lys  
 64 100 105 110  
 67 Gln Ile Ser Val Pro Tyr Asn Glu Ile Ser Thr Asn Lys Thr Thr Val  
 68 115 120 125  
 71 Thr Ala Gln Glu Ile Asp Leu Lys Val Arg Lys Phe Leu Ile Ala Gln  
 72 130 135 140  
 75 His Gln Leu Tyr Ser Ser Gly Ser Ser Tyr Lys Ser Gly Arg Leu Val  
 76 145 150 155 160  
 79 Phe His Thr Asn Asp Asn Ser Asp Lys Tyr Ser Phe Asp Leu Phe Tyr  
 80 165 170 175  
 83 Val Gly Tyr Arg Asp Lys Glu Ser Ile Phe Lys Val Tyr Lys Asp Asn  
 84 180 185 190  
 87 Lys Ser Phe Asn Ile Asp Lys Ile Gly His Leu Asp Ile Glu Ile Asp  
 88 195 200 205  
 91 Ser

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95 <210> SEQ ID NO: 2
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97 <212> TYPE: PRT
98 <213> ORGANISM: Streptococcus pyogenes
101 <400> SEQUENCE: 2
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104 1          5          10          15
107 Val Tyr Glu Tyr Ser Asp Ile Val Ile Asp Phe Lys Thr Ser His Cys
108          20          25          30
111 Leu Val Thr Lys Lys Leu Asp Val Arg Asp Ala Arg Asp Phe Phe Ile
112          35          40          45
115 Asn Ser Glu Met Asp Glu Tyr Ala Ala Asn Asp Phe Lys Thr Gly Asp
116          50          55          60
119 Lys Ile Ala Val Phe Ser Val Pro Phe Asp Trp Asn Tyr Leu Ser Lys
120 65          70          75          80
123 Gly Lys Val Thr Ala Tyr Thr Tyr Gly Gly Ile Thr Pro Tyr Gln Lys
124          85          90          95
127 Thr Ser Ile Pro Lys Asn Ile Pro Val Asn Leu Trp Ile Asn Gly Lys
128          100         105         110
131 Gln Ile Ser Val Pro Tyr Asn Glu Ile Ser Thr Asn Lys Thr Thr Val
132          115         120         125
135 Thr Ala Gln Glu Ile Asp Leu Lys Val Arg Lys Phe Leu Ile Ala Gln
136          130         135         140
139 His Gln Leu Tyr Ser Ser Gly Ser Ser Tyr Lys Ser Gly Arg Leu Val
140 145          150         155         160
143 Phe His Thr Asn Asp Asn Ser Asp Lys Tyr Ser Phe Asp Leu Leu Tyr
144          165         170         175
147 Val Gly Tyr Arg Asp Gln Glu Ser Ile Phe Lys Val Tyr Lys Asp Asn
148          180         185         190
151 Lys Ser Phe Asn Ile Asp Lys Ile Gly His Leu Asp Ile Glu Ile Asp
152          195         200         205
155 Ser
159 <210> SEQ ID NO: 3
160 <211> LENGTH: 209
161 <212> TYPE: PRT
162 <213> ORGANISM: Streptococcus pyogenes
165 <400> SEQUENCE: 3
167 Leu Glu Val Asp Asn Asn Ser Leu Leu Arg Asn Ile Tyr Ser Thr Ile
168 1          5          10          15
171 Val Ala Glu Tyr Ser Asp Ile Val Ile Asp Phe Lys Thr Ser His Cys
172          20          25          30
175 Leu Val Thr Lys Lys Leu Asp Val Arg Asp Ala Arg Asp Phe Phe Ile
176          35          40          45
179 Asn Ser Glu Met Asp Glu Tyr Ala Ala Asn Asp Phe Lys Thr Gly Asp
180          50          55          60
183 Lys Ile Ala Val Phe Ser Val Pro Phe Asp Trp Asn Tyr Leu Ser Lys
184 65          70          75          80
187 Gly Lys Val Thr Ala Tyr Thr Tyr Gly Gly Ile Thr Pro Tyr Gln Lys
188          85          90          95

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191 Thr Ser Ile Pro Lys Asn Ile Pro Val Asn Leu Trp Ile Asn Gly Lys
192          100          105          110
195 Gln Ile Ser Val Pro Tyr Asn Glu Ile Ser Thr Asn Lys Thr Thr Val
196          115          120          125
199 Thr Ala Gln Glu Ile Asp Leu Lys Val Arg Lys Phe Leu Ile Ala Gln
200          130          135          140
203 His Gln Leu Tyr Ser Ser Gly Ser Ser Tyr Lys Ser Gly Arg Leu Val
204 145          150          155          160
207 Phe His Thr Asn Asp Asn Ser Asp Lys Tyr Ser Phe Asp Leu Leu Tyr
208          165          170          175
211 Val Gly Tyr Arg Asp Gln Glu Ser Ile Phe Lys Val Tyr Lys Asp Asn
212          180          185          190
215 Lys Ser Phe Asn Ile Asp Lys Ile Gly His Leu Asp Ile Glu Ile Asp
216          195          200          205
219 Ser
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224 <211> LENGTH: 27
225 <212> TYPE: DNA
226 <213> ORGANISM: Artificial sequence
229 <220> FEATURE:
230 <223> OTHER INFORMATION: Primer
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238 <211> LENGTH: 27
239 <212> TYPE: DNA
240 <213> ORGANISM: Artificial sequence
243 <220> FEATURE:
244 <223> OTHER INFORMATION: Primer
246 <400> SEQUENCE: 5
247 gaatattcag ctacaatcgt actatag
250 <210> SEQ ID NO: 6
251 <211> LENGTH: 24
252 <212> TYPE: DNA
253 <213> ORGANISM: Artificial Sequence
256 <220> FEATURE:
257 <223> OTHER INFORMATION: Primer
259 <220> FEATURE:
260 <223> OTHER INFORMATION: Primer
262 <400> SEQUENCE: 6
263 gatgtagat gtgctagaga tttc
266 <210> SEQ ID NO: 7
267 <211> LENGTH: 26
268 <212> TYPE: DNA
269 <213> ORGANISM: Artificial sequence
272 <220> FEATURE:
273 <223> OTHER INFORMATION: Primer
275 <400> SEQUENCE: 7
276 ctctagcaca tctaacaatca agtttc

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281 <212> TYPE: DNA
282 <213> ORGANISM: Artificial sequence
285 <220> FEATURE:
286 <223> OTHER INFORMATION: Primer
288 <400> SEQUENCE: 8
289 ccatttgatt tgaactatatt atc 23
292 <210> SEQ ID NO: 9
293 <211> LENGTH: 23
294 <212> TYPE: DNA
295 <213> ORGANISM: Artificial sequence
298 <220> FEATURE:
299 <223> OTHER INFORMATION: Primer
301 <400> SEQUENCE: 9
302 gataaatagt tcaaatcaaa tgg 23
305 <210> SEQ ID NO: 10
306 <211> LENGTH: 23
307 <212> TYPE: DNA
308 <213> ORGANISM: Artificial sequence
311 <220> FEATURE:
312 <223> OTHER INFORMATION: Primer
314 <400> SEQUENCE: 10
315 gatatagaga tcaagaaagt atc 23
318 <210> SEQ ID NO: 11
319 <211> LENGTH: 23
320 <212> TYPE: DNA
321 <213> ORGANISM: Artificial sequence
324 <220> FEATURE:
325 <223> OTHER INFORMATION: Primer
327 <400> SEQUENCE: 11
328 gatactttct tgaatcttat atc 23
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332 <211> LENGTH: 18
333 <212> TYPE: DNA
334 <213> ORGANISM: Artificial sequence
337 <220> FEATURE:
338 <223> OTHER INFORMATION: Primer
340 <400> SEQUENCE: 12
341 accatcctcc aaaatcgg 18
344 <210> SEQ ID NO: 13
345 <211> LENGTH: 18
346 <212> TYPE: DNA
347 <213> ORGANISM: Artificial sequence
350 <220> FEATURE:
351 <223> OTHER INFORMATION: Primer
353 <400> SEQUENCE: 13
354 tcagaggttt tcaccgtc 18

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**VERIFICATION SUMMARY**

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